



A3. Work Plan: Appendix 2

Scope of Work: Santa Barbara County/South Coast Subregion, Recycled Water Development Plan

Introduction

In support of the regional goals and objectives established by the Cooperating Partners, Steering Committee and Stakeholders Group for the Integrated Regional Water Management (IRWM) Region of Santa Barbara County, the South Coast Watershed Subregion will conduct a study to identify technical, institutional, political and social opportunities to advance the use of recycled water and address related constraints for implementation. Increased use of recycled water will increase regional supply, improve the quality of the water being discharged into the ocean, and increase the region's self-sufficiency by reducing dependency on imported water. This study coordinates with three Program Preferences specifically "regional project," "integrate water management programs within a hydrologic sub-region," and "contribute to attainment of one or more of the objectives of the CALFD Bay-Delta Program" as well as two IRWM Statewide Priorities, specifically "drought preparedness" and "use and reuse water more efficiently." The study also serves to make the region more self-sufficient regarding water supply and furthers Santa Barbara Region IRWM objectives in the following categories:

- Reduce Water Demand:
 - Increase water reuse and water conservation measures to increase and extend existing water supplies
- Increase Water Supply:
 - Match water quality to water use by lower quality water or recycled water for wildfire suppression, landscaping, and other non-potable uses would make more potable water available to the region
 - Need to use lower quality water or recycled water for large agricultural irrigation needs instead of costly and unreliable SWP water
 - Improve management of groundwater basins through conjunctive use
- Improve Water Quality:
 - Improve quality of groundwater, stormwater runoff, agricultural water runoff, and treated water discharges to regional water bodies and ocean recreational areas
 - Improve water management to protect and restore ecosystems and wildlife habitat

Building on recent and current recycled water planning activities in the Subregion, this Recycled Water Development Plan will consider the findings of these previous studies as well as current thinking and facilitate discussion among the Subregion water and sewage treatment agencies from a regional perspective. As recognized in the DWR Prop 84 Guidelines, applying a regional approach to recycled water planning can provide a process for developing strategies that result in synergies and efficiencies in the utilization of financial and water resources. Opportunities will be sought to potentially restructure or integrate previously envisioned local projects, expand potential end uses so as to maximize regional objectives, and potentially provide multiple benefits to multiple stakeholders. This study will identify the opportunities and constraints of advancing recycled water generation and use in the South Coast Subregion, and will describe next steps toward implementing cost-effective, feasible projects as elements of the Region's water management portfolio.

This study will be executed with the guidance and assistance of liaisons from each of the following RWMG agencies within the South Coast Subregion, as listed below. Those same agencies have reviewed the scope of work and are fully supportive of this study.

- City of Santa Barbara
- Carpinteria Sanitation District
- Carpinteria Water District
- Montecito Sanitation District
- Goleta Sanitation District
- Goleta Water District
- Goleta West Sanitation District
- Heal the Ocean

The study will include the topics that are outlined in the SWRCB Water Recycling Program Funding Guidelines, Appendix B, to ensure that it is eligible for grant or low interest loans from the SWRCB.

http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/docs/final_wrfpguidelines071508.pdf.

Scope of Work

This scope of work consists of the following activities, described below.

- Initiate stakeholder process through IRWM Plan 2012 outreach process
- Conduct literature review of pertinent Subregion systems and planning activities
- Summarize current and anticipated recycled water regulations and policies
- Describe existing recycled water treatment, sewage treatment, storage and delivery systems

- Identify potential customers and uses
- Identify treatment options to meet water quality needs
- Identify potential near-term projects for implementation to meet expanded uses
- Identify constraints to the implementation of projects
- Identify next steps to address constraints and advance projects
- Coordination with Cooperating Partners on integrating project with IRWM Plan 2012

All deliverables will be submitted electronically in pdf format via e-mail. A hard copy of the Final Report will be provided to each of the South Coast Cooperating Partner agencies (a total of up to 10 hard copies).

Technical Memoranda (TMs) comments will be reconciled by IRWM Regional Coordinator. One set of conformed and non-conflicting comments from the Cooperating Partners will be provided to the consultant by the IRWM Regional Coordinator. Revisions and responses to the comments will be reflected in the Draft Report which will incorporate information provided in the TMs.

Task 1: Initiate Stakeholder Process

A stakeholder process will be coordinated through the IRWM Plan 2012 outreach process. Stakeholders will be identified using existing contact lists, by regional environmental groups, and announcements of initiation of the planning effort on the South Coast. Meeting announcements will be publicized in the local press and on the IRWM website. Stakeholders will have the opportunity to attend meetings and comment on the draft and final plan. Additional outreach efforts may be included in the final scope of the planning effort.

Task 2: Literature Review

Review previous pertinent study reports that describe recycled water planning and project implementation efforts for the South Coast Subregion obtained from the Cooperating Partners. These include:

- City of Santa Barbara's Water Supply Planning Study (Carollo, 2009)
- Cost of Tertiary Wastewater Treatment for Southern Santa Barbara County (Metcalf & Eddy, 2001)
- Water Reclamation Research (Ian Adam, 2000)
- California Ocean Wastewater Discharge Report and Inventory (Heal the Ocean, 2010)
- Goleta West Sanitary District's Proposed New Wastewater Treatment Plant Site and Treatment Alternatives Evaluation (Black & Veatch, 2004)
- Goleta Water District and Goleta Sanitary District Reclaimed Water Project Study (CDM, 1999)

Deliverable:

TM summarizing the key findings of each document and its relevance to the current study. TM length estimated at 5-10 pages plus tables.

Task 3: Regulations Summary

Describe pertinent federal, state and local recycled water regulations and policies that affect recycled water system planning for the South Coast Subregion. These include:

- USEPA Guidelines for Water Reuse (2004)
- California Water Code, Division 7
- California Code of Regulations (CCR), Title 22
- CCR, Title 17
- Statewide Recycled Water Policy
- California Plumbing Code (2007)
- Draft Groundwater Recharge Reuse Regulations
- Local applicable regulations/policies/ordinances

Deliverable:

TM summarizing the key findings of each document and its relevance to the current study. TM length estimated at 3-5 pages plus tables.

Task 4: Existing Sewage Treatment and Recycled Water Systems

For each of the four systems represented by the South Coast Subregion Cooperating Partner agencies (i.e., City of Santa Barbara, Montecito, Carpinteria, and Goleta), summarize existing recycled water infrastructure, including source water, treatment methods, daily/seasonal ranges of flow, site layout/constraints, delivery systems (storage, conveyance and pumping), end users and associated recycled water use quantities and flow patterns (daily, seasonal), as well as point-of-use treatment, if applicable.

- GIS data will be provided by agencies for system mapping
- Recycled water use data will be provided by agencies

Deliverable:

TM summarizing each of the four recycled water systems in the South Coast Subregion. TM length estimated at 5-10 pages plus tables.

Task 5: Potential Customers

For each of the four systems described in Task 3, identify potential customers (urban, agricultural and industrial) that are not currently served with recycled water. In conjunction with information from previous market surveys conducted for some of the South Coast water agencies, current potable water use will be analyzed to identify potential opportunities for replacement with recycled water. In addition, expanded use of recycled water by existing customers will be explored.

- Agencies will provide water consumption data for existing individual potable water users, including: billing address, type of use, potable water consumption (daily), latitude and longitude. Data to be provided in GIS format.
- Water quality requirements (e.g. scaling of drip irrigation or crop salt limitations) will be assumed based on use type, unless direct follow up contact with the potential customer is conducted.
- Contact with potential customers will be limited to those with significant water consumption and thus greatest opportunity for potable water offset and will be coordinated with the Cooperating Agency liaison.
- Identify top candidate end users (estimated at up to 20 users) for further consideration in subsequent tasks based on volume, proximity to existing delivery systems, feasibility, and other criteria that will be considered.

Deliverable:

TM summarizing recycled water end user opportunities for each of the four recycled water systems in the South Coast Subregion. TM length estimated at 5-10 pages plus tables.

Task 6: Treatment Needs

For each of the recycled water end user opportunities identified in Task 4, identify treatment needs, i.e., levels of treatment required and options available to achieve these treatment levels) to meet the water quality requirements assumed or established through direct communications with the potential end users.

- Treatment plant upgrades vs. point-of-use treatment will be considered.

Deliverable:

TM summarizing recycled water treatment needs for each of the top candidate end users in the South Coast Subregion. TM length estimated at 8-10 pages plus tables.

Task 7: Distribution Needs

Based on the findings of Tasks 4 and 5, broadly identify the distribution system needs, i.e., conveyance, storage, pumping, to provide recycled water to the candidate end users. For this preliminary analysis, estimates of flow, storage and pressure requirements will be conducted on a conceptual level, without the benefits of rigorous hydraulic calculations or modeling.

Deliverable:

TM summarizing recycled water end user opportunities for each of the four recycled water systems in the South Coast Subregion. TM length estimated at 5-10 pages plus tables.

Task 8: Potential Projects

Identify potential projects for near-term implementation. Characterize project benefits to the subregion and evaluate projects based on an assessment of these benefits.

Identify performance measures to determine how IRWM objectives are being met. Identify project status and potential needs for additional study and evaluation such as a cost/benefit analysis, hydraulic modeling, groundwater modeling, etc., as needed to further advance the project.

- Planning level cost estimates, (e.g., based on \$/gal treated or stored, and \$/inch/linear foot of pipeline) will be developed for the selected projects to serve only as a relative basis for comparison. Detailed cost analyses will not be conducted as part of this plan development, but previously prepared cost estimates referenced in the documents reviewed may be cited.
- Use previously cited recent costs estimates to delineate an approach to updating these cost estimates based on data gaps and additional technical analysis that might be needed. Order of magnitude costs are assumed.

Deliverable:

TM summarizing potential projects to increase recycled water in the South Coast Subregion. TM length estimated at 8-10 pages plus tables.

Task 9: Project Constraints

Identify environmental, political, social constraints associated with the projects identified in Task 7 for both the Subregion in general and for specific agencies associated with specific potential projects. This will be initiated through interviews with Cooperating Partner liaisons, and meetings with project proponents. Up to 10 meetings are budgeted for this effort.

Deliverable:

TM summarizing environmental, political, social constraints identified for the implementation of recycled water candidate projects for the South Coast Subregion identified in Task 7. TM length estimated at 5-10 pages plus tables.

Task 10: Study Report

Prepare draft and final report that will include an executive summary and consolidation of findings of the TMs prepared for Tasks 1 through 8. Draft report will be transmitted electronically (via email) to the Cooperating Partner South Coast agencies and made available for public review on the IRWM website. One set of conformed review comments will be provided to the consultant prior to the mid-project review meeting, wherein they will be discussed and potential conflicting comments identified and resolved.

Deliverable:

Draft (electronic only) and final (electronic and hard copy) report. Report length estimated at 30-40 pages plus tables.

Task 11: Project Oversight and Management

Conduct project management and coordination activities to manage scope, budget and schedule. This will include the following:

- Kickoff/scoping meeting with the designated study liaison from the participating agencies
- Mid-project review meeting after issuance of the draft study report
- Monthly invoicing and status reports

The RWMG (Cooperating Partners) will execute oversight of the project. The public will be invited to attend the aforementioned project meetings to provide input on scoping. The public also will have the opportunity to comment on this study when the Santa Barbara County IRWM Plan Update 2011 public meetings are held.

Deliverables:

Meeting notes from kickoff meeting and mid-project review meeting. Monthly invoices and status reports.